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## Self-efficacy and Prosocial Tendencies in Italian Adolescents

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### Abstract

This study explored the relationships between different types of self-efficacy and prosocial tendencies in a sample of 108 Italian adolescents, attending two Public Junior and High Schools at Catania (Sicily, Italy). We used three scales of measure of empathic, problem solving, and interpersonal communication self-efficacy (Caprara, 2001), and the Prosocial Tendencies Measure (Carlo & Randall, 2002), divided in three main factors (anonymous, public, and helping behavior in emotionally critical and dire situations). Results: Most adolescents expressed low levels of self-efficacy in problem solving and empathy, but both low and high levels of self-efficacy in interpersonal communication. Self-efficacy in problem solving, empathy, and interpersonal communication was positively related to helping behavior in emotionally critical and dire situations; in addition, self-efficacy in problem solving and empathy was positively related to public prosocial behavior. Future research could analyze the impact of other psychological dimensions (e.g. resilience, personality traits, and value orientations) on prosocial tendencies.

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**Keywords:** Self-efficacy; prosocial tendencies; adolescence;

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### 1. Introduction

The present paper deals with two of the most important themes of scientific literature concerning the role of self-efficacy (specifically, the empathic, problem solving, and interpersonal communication self-efficacy) in individual growth and the functioning of prosocial behavior in human development. Only a few studies about the relationship between empathic self-efficacy and prosocial behavior were carried out in adolescence. The perceived capability to sense another person's feelings and to respond empathetically to others' stress and misfortune (that is, empathic self-efficacy) has shown the highest correlation with prosociality (Caprara & Steca,

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2005; Caprara & Steca, 2007; Alessandri et al., 2009; Caprara, Alessandri, & Eisenberg, 2012). As found in a sample of Iranian undergraduates students, Azimpour and her colleagues (2012) demonstrated that empathy was positively related to the compliant, emotional, anonymous, and altruistic prosocial behaviors and negatively to public prosocial behavior. In a longitudinal study with a sample of Italian adolescents, Alessandri and his colleagues (2009) observed that empathic self-efficacy mediated the relationship between regulative emotional self-efficacy beliefs and prosociality. More recently, in a sample of Swedish high school students, Eklund et al. (2012) found that both empathic other-oriented and academic self-efficacy had a stronger and positive association with prosocial behavior than self-oriented emotional self-efficacy.

Deepening the role of other types of self-efficacy on the prosociality in adolescence, very little evidence of the relationship between prosocial tendencies and problem solving and interpersonal communication self-efficacy was observed and this relevant lack urged the authors to analyze this theme for the first time in Italian school context.

## 2. Literature review

The excursus of recent literature allowed the authors to deepen the different definitions and measures used to explore the topic of prosocial behavior, that is, a voluntary action aimed to benefit other people. As reported by Carlo and Randall (2002), prosocial behavior has been articulated into six types: 1) the public prosocial behavior, referred to actions that benefit other people enacted in the presence of others to obtain their approval and respect; 2) the anonymous prosocial behavior, referred to the tendency to help others without other people's knowledge; 3) the dire prosocial behavior, referred to helping other people under emergency or critical situations; 4) the emotional prosocial behavior, intended to benefit the others enacting under emotionally evocative circumstances; 5) the compliant prosocial behavior, referred to helping other people in response to a verbal or non-verbal request; 6) the altruistic prosocial behavior, consisting of helping others when there is little or no perceived potential for a direct and explicit reward to the self. As already in Fabes, Carlo, Kupanoff, and Laible's study (1999) and in Carlo, Roesch and Koller's research (1999), also Carlo and Randall (2002) found relevant differences for sex in college students: girls scored higher in altruistic, anonymous, emotional, and compliant prosocial behaviors than boys; on the contrary, boys scored higher than girls in public prosocial behavior. In addition, in a sample of early and middle adolescents, Carlo, Hausmann, Christiansen, and Randall (2003) indicated that middle adolescents and girls scored higher on altruistic prosocial tendencies more than early adolescents and boys, middle adolescents scored higher on anonymous prosocial tendencies than early ones, boys scored higher on public prosocial tendencies more than girls, and finally girls scored higher on emotional prosocial tendencies more than boys. Furthermore, Eklund et al. (2012) found that girls exhibited prosocial behaviors more than boys.

Research on prosocial behaviors showed the existence of individual differences in adolescents who exhibit those behaviors (Roberts & Strayer, 1996; Carlo & Randall, 2002; Carlo et al., 2003). Thus, adolescents with high levels of perspective taking (that is, understanding another's thoughts and feelings) scored high on altruistic, compliant, emotional, dire, and anonymous prosocial behaviors, but low on public prosocial behavior; in addition, adolescents who scored higher on altruistic, compliant, and emotional prosocial behaviors, but lower on public prosocial behavior, reported high levels of internalized moral reasoning. Other studies found differences in helping behavior toward other people in emotionally evocative and critical situations (Carlo, Eisenberg, Troyer, Switzer, & Speer, 1991), in front of others, anonymously, when asked to, and when there is a cost to the self (Schroeder, Penner, Dovidio, & Piliavin, 1995). For example, as in Carlo and colleagues' study (2003), adolescents who frequently engaged in altruistic forms of helping expressed low levels of approval-oriented prosocial moral reasoning; adolescents who frequently engaged in emotional forms of helping expressed high levels of internalized prosocial moral reasoning and low levels of hedonistic prosocial moral reasoning; additionally, adolescents who frequently engage in public forms of helping expressed high levels of approval-

oriented prosocial moral reasoning and, finally, adolescents who often engage in compliant forms of helping expressed low levels of hedonistic prosocial moral reasoning (see Eisenberg & Fabes, 1998; Carlo et al., 1991).

Several researches investigated the relationships between prosocial behavior, empathy, social desirability (Azimpour, Neasi, Shehni-Yailagh, & Arshadi, 2012), religiosity and value of kindness (Hardy & Carlo, 2005), and empathic and academic self-efficacy (Alessandri, Caprara, Eisenberg, & Steca, 2009; Eklund et al., 2012). In relation to the last dimension, that represents the other topic of this paper, self-efficacy is referred to the individual's perception of his or her ability to achieve desired goals by applying knowledge to specific tasks (Bandura, 1986). It is possible to distinguish different types of self-efficacy as academic, regulative emotional, empathic, interpersonal communication, problem solving, and scholastic self-efficacy (see Caprara, 2001). Specifically, the "academic self-efficacy" consists of the perceived efficacy for self-regulated learning and mastery of various academic matters; the "emphatic self-efficacy" is referred to the individual's ability to sense another person's feelings and need for emotional support, to experience emotions from another person's perspective, and to be sensitive to how one's actions affect others' feelings; the "problem solving self-efficacy" is defined as the perceived ability to solve and cope with problems in a creative and innovative way; finally, the "communication self-efficacy" is referred to the belief about one's ability to communicate efficiently with others and to cope cooperatively with group situations. Differences for sex were noted in the sense that women perceived themselves as more efficient in empathic self-efficacy than men, while men perceived themselves as more efficient in social self-efficacy than women (Caprara & Steca, 2005); in addition, girls had higher academic self-efficacy than boys (Eklund et al., 2012).

### **3. Methodology**

#### *3.1. Purpose*

This study explored the relationships between empathic, problem solving, and interpersonal communication self-efficacy and prosocial tendencies in a sample of Italian early and middle adolescents. We predicted that highly efficient adolescents (both early and middle ones) in empathy, problem solving, and interpersonal communication will be likely to act in prosocial way more than lowly efficient adolescents. In addition, as reported in many studies carried out by Fabes et al. (1999), Carlo et al. (1999), Carlo and Randall (2002), and Carlo et al. (2013), we expected that early and middle adolescent girls will express emotional and anonymous forms of prosocial behavior more than boys, who will express public forms of prosocial behavior more than girls. In relation to perceived self-efficacy, we predicted that girls will score higher than boys in empathic and interpersonal communication self-efficacy, but lower in problem solving self-efficacy, as in previous findings by Eklund et al. (2012), and Caprara and Steca (2005).

#### *3.2. Sampling*

The sample of this study was composed by 108 Italian adolescents (63 boys and 45 girls), randomly chosen from those attending two Public Junior and High Schools at Catania (Sicily, Italy). The original sample was formed by 120 adolescents, balanced for sex and type of schools, but some of them returned the incomplete questionnaire and were excluded by the total sample. In relation to the median value, participants were divided into two age groups: early adolescents ( $M_{age}=12,8$ ,  $sd=,76$ ) and middle adolescents ( $M_{age}=16,4$ ,  $sd=1,18$ ).

#### *3.3. Measure and procedure*

Three scales of measure of self-efficacy, the Empathic Self-efficacy Scale, the Problem-solving Self-efficacy Scale, and the Interpersonal Communication Self-efficacy Scale, were elaborated by the research group of

Caprara (2001) and applied to participants of this study. The Empathic Self-efficacy Scale was formed by 12 statements valuable on a 5-point Likert scale (Cronbach's  $\alpha = .71$ ) ranging from 1 (*not at all efficient*) to 5 intervals (*completely efficient*): e.g., "How well can you experience how a person in trouble feels?". The Problem-solving Self-efficacy Scale was composed by 14 statements on a 7-point Likert scale (Cronbach's  $\alpha = .79$ ) ranging from 1 (*not at all efficient*) to 7 intervals (*completely efficient*): e.g., "How well can you find new solutions to problems?". The Interpersonal Communication Self-efficacy Scale consisted of 19 statements valuable on a 7-point Likert scale (Cronbach's  $\alpha = .79$ ) ranging from 1 (*not at all efficient*) to 7 intervals (*completely efficient*): e.g., "How well can you take into consideration viewpoints different from your opinions?".

We used the 22-item version of Prosocial Tendencies Measure (PTM: Carlo & Randall, 2002), originally developed to assess the six types of prosocial behavior in college students (anonymous, public, emotional, compliant, dire, and altruistic behavior). This measure was modified to be used with Italian early and middle adolescents and consisted of three main factors: anonymous (Cronbach's  $\alpha = .79$ ), public (Cronbach's  $\alpha = .81$ ), and helping behavior in emotionally critical and dire situations (Cronbach's  $\alpha = .80$ ). Each item was valued on a 5-point Likert scale ranging from 1 (*does not describe me at all*) to 5 intervals (*describes me very well*). For anonymous behavior, e.g. "I think that helping others without them knowing is the best type of situation"; for public behavior, e.g. "I can help others best when people are watching me"; for helping behavior in emotionally critical and dire situations, e.g., "I tend to help people who are in real crisis or need" and "I respond to helping others best when the situation is highly emotional".

#### 4. Data analysis

The data examination was carried out using the SPSS 15 by means of factorial analysis applied to the PTM, Pearson's linear correlations, t-tests, and Chi Square Test. Sex and age groups of participants were used as independent variables, while mean scores obtained on each factor of PTM and self-efficacy measures were used as dependent variables.

#### 5. Results

In relation to the measures of self-efficacy, participants were grouped in the following three levels: for empathic self-efficacy, the 46,3% of adolescents were allocated at low level, the 24,1% at medium level, and the 29,6% at high level ( $\chi^2 = 8.67$ ,  $df = 2$ ,  $p = .013$ ); for self-efficacy in problem solving, the 55,6% of adolescents were included at low level, the 20,4% at medium level, and the 24,1% at high level ( $\chi^2 = 24.22$ ,  $df = 2$ ,  $p < .001$ ); finally, for self-efficacy in interpersonal communication, the 40,7% of adolescents were allocated at high level, the 21,3% at medium level, and the 38% at low level ( $\chi^2 = 7.17$ ,  $df = 2$ ,  $p = .03$ ). Results showed that, without differences for sex and age groups, most of the adolescents expressed low levels of self-efficacy in problem solving and empathy, but both low and high levels of self-efficacy in interpersonal communication.

Significant correlations were found among the three measures of self-efficacy: thus, as reported in Table 1, the more the adolescents perceived themselves as efficient to respond in an empathic way to the other people, the more they felt themselves efficient to solve problems and manage interpersonal relations, and vice versa; additionally, the more they perceived themselves as efficient to search solutions to problems, the more they were able to manage other people in interpersonal relations.

Table 1. Correlations among the three measures of self-efficacy – Total sample ( $n = 108$ )

Self-efficacy	1	2	3
1. Empathy	-		
2. Problem solving	.48*	-	
3. Interpersonal communication	.41*	.44*	-
Level of significance * $p < .001$			

Regarding to the different types of prosocial behavior, factorial analysis for grouping the 22 items of PTM was carried out with Principal Components Analysis as extraction method, using Varimax rotation and eigenvalues > 1. Three main factors were found: the first factor, named “helping behavior in emotionally critical and dire situations”, accounted for the 23,6% of the total variance; the second factor, called “public prosocial behavior”, accounted for the 14,5% of the variance, and the third factor, termed “anonymous prosocial behavior”, accounted for the 9,4% of the variance. Respectively, the first factor included the following ten items: 2, 4, 6, 7, 9, 12, 14, 17, 18, and 21; the second factor was formed by seven items: 1, 3, 5, 10, 13, 16, and 20; finally, the third factor included five items: 8, 11, 15, 19, and 22 (see Table 2).

Table 2. Factorial analysis for 22-items of PTM – Total sample (n=108)

Items of Prosocial Tendencies Measure	Factor 1	Factor 2	Factor 3
I tend to help people who hurt themselves badly (item 9)	.76		
It is most fulfilling to me when I can comfort someone who is very distressed (item 2)	.68		
I never hesitate to help others when they ask for it (item 18)	.64		
I tend to help others particularly when they are emotionally distressed (item 12)	.63		
I tend to help people who are in a real crisis or need (item 6)	.62		
When people ask me to help them, I don't hesitate (item 7)	.62		
It is easy for me to help others when they are in a dire situation (item 14)	.61		
Emotional situations make me want to help needy others (item 21)	.58		
I respond to helping others best when the situation is highly emotional (item 17)	.40		
I think that one of the best things about helping others is that it makes me look good (item 4)	.35		
Helping others when I am in the spotlight is when I work best (item 13)		.78	
When other people are round, it is easier for me to help needy others (item 3)		.70	
I get the most out of helping others when it is done in front of others (item 5)		.69	
One of the best things about doing charity work is that it looks good on my resume (item 20)		.67	
I can help others best when people are watching me (item 1)		.67	
I believe I should receive more recognition for the time and energy I spend on charity work (item 16)		.61	
I believe that donating goods or money works best when it is a benefit for the giver (item 10)		.44	
I think that helping others without them knowing is the best type of situation (item 19)			.77
Most of the time, I help others when they do not know who helped them (item 15)			.76
I tend to help needy others most when they do not know who helped them (item 11)			.69
I prefer to donate money anonymously (item 8)			.67
I often make anonymous donations because they make me feel good (item 22)			.66

Significant and positive correlations were found between public prosocial and helping behavior in emotionally critical and dire situations ( $r_{(108)}=.21, p=.03$ ), anonymous and helping behavior in emotionally critical and dire situations ( $r_{(108)}=.22, p=.02$ ), and anonymous and public behavior ( $r_{(108)}=.40, p<.001$ ). Differences for sex and age groups were found only for public prosocial behavior (respectively, for age groups:  $t_{(106)}=3.65, p<.001$ ; for sex:  $t_{(106)}=2.24, p=.03$ ): early adolescents used this behavior more than middle adolescents ( $M=2,82, sd=.81$  vs.  $M=2,27, sd=.76$ ) and boys were more likely to adopt this behavior toward other people than girls ( $M=2,70, sd=.83$  vs.  $M=2,34, sd=.80$ ).

Positive and significant correlations demonstrated that self-efficacy in problem solving, empathy, and interpersonal communication was positively related to helping behavior in emotionally critical and dire situations (Table 3); in addition, self-efficacy in problem solving and empathy was positively related to public prosocial

behavior (Table 3). These results indicated that the more the adolescents perceived themselves as efficient in problem solving, empathy, and interpersonal communication, the more they tended to adopt helping behavior in emotionally critical and dire circumstances and public prosocial behavior.

Table 3. Correlations between self-efficacy and prosocial behaviors - Total sample ( $n=108$ )

Self-efficacy	Factor 1	Factor 2	Factor 3
Empathy	.51*	.20**	.08
Problem solving	.36*	.33*	.12
Interpersonal communication	.48*	.08	.06
Levels of significance * $p < .001$ and * $p < .05$			

## 6. Discussion

The topics of self-efficacy and prosociality have received a great relevance in this study carried out with early and middle Italian adolescents. For the specificity of self-efficacy (see Bandura, 1997), the paucity of studies concerning the role of self-efficacy in relation to the prosociality in Italian context allowed us to consider three of the most important aspects of the perceived sense of personal efficacy in school environment among early and middle adolescents: the perceived ability to feel another person's emotional state and to be sensitive to how a person's actions affect others' feelings (empathic self-efficacy), the perceived ability to cope with problems in an innovative and unfamiliar way (problem solving self-efficacy), and the perceived ability to communicate efficiently and cooperatively in group situations (interpersonal communication self-efficacy). According to the initial hypothesis, we predicted that girls would score higher than boys in empathic and interpersonal communication self-efficacy, but lower in problem solving self-efficacy, as previously found by Eklund et al. (2012), and, in Italian context with older adolescents and young adults, by Caprara and Steca (2005). Contrary to all expectations, the results of our study demonstrated the absence of significant differences for sex and age groups in the three aspects of self-efficacy.

For the prosociality, we applied the modified version of prosocial tendencies measure, created by Carlo and Randall (2002) and originally developed to assess six types of prosocial behavior (anonymous, public, emotional, compliant, dire, and altruistic behavior). We used this measure with Italian early and middle adolescents in order to confirm or disconfirm the structure of six factors reported by the authors. Thus, in our study, the factorial analysis disconfirmed this structure, validating the composition of three factors corresponding to the three types of prosocial behaviours, named, respectively, "helping behavior in emotionally critical and dire situations", "public prosocial behavior", and "anonymous prosocial behavior". As in Carlo and Randall (2002), and Carlo et al. (2013), we expected that early and middle adolescent girls would express emotional and anonymous prosocial behaviors more than boys and that early and middle boys would express public prosocial behaviors more than girls. The results were partially in line with the hypothesis: boys tended to express public prosocial behaviors more than girls and early adolescents used this behavior more than middle adolescents.

The main purpose of our study was focused on the exploration of the relationships between empathic, problem solving, and interpersonal communication self-efficacy and prosocial tendencies in Italian adolescents. We predicted that highly efficient adolescents in the three analyzed aspects would be likely to act in prosocial way more than lowly efficient ones. Our findings partially confirmed this hypothesis: thus, highly efficient adolescents in empathy, problem solving, and interpersonal communication were likely to act specifically for helping the others in emotionally critical and dire circumstances and in public situations. Our results represented a partial confirmation of findings obtained in other studies (Fabes et al., 1999; Carlo & Randall, 2002; Carlo et al., 2013; Eklund et al., 2012; Caprara & Steca, 2005), even if the relationship between different types of self-efficacy and prosocial tendencies will need a further deepening in order to analyze the developmental change



from infancy to adulthood. Among the limits of the present study, it is possible to indicate the necessity 1) to replicate this investigation with a large number of Italian adolescents for the representativeness of the sample, 2) to generalize these results to other countries, because the small number of participants in our study could be considered a limit for the validation of three-factors structure of PTM, and 3) to carry out a longitudinal study, from early adolescence to young adulthood, in order to emphasize the change in the development of prosocial tendencies. Furthermore, we would consider very interesting to analyze the impact of other psychological dimensions (e.g. resilience, personality traits, and value orientations) on prosocial tendencies, deepening the effect of mediation or moderation of self-efficacy on prosociality.

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